

CLAIMS

SUB A1
1. A polishing apparatus with a polishing table having
a polishing surface and a top ring for pressing a workpiece
5 to be polished at a predetermined pressure with interposing
said workpiece between said polishing table and said top
ring to polish said workpiece, said polishing apparatus
comprising:

at least two dressing units for dressing said
10 polishing surface by being brought into contact with a
surface of a polishing cloth.

2. A polishing apparatus according to claim 1, wherein
dressers in said at least two dressing units comprise
15 different dressing elements, respectively.

SUB A2
3. A polishing apparatus according to claim 1,
wherein:

at least one dressing unit is a dressing unit
20 comprising a dresser having a diameter larger than said
workpiece to be polished; and

at least one dressing unit is a dressing unit
comprising a dresser having a diameter smaller than said
workpiece to be polished.

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4. A dressing method for dressing a polishing cloth
provided in a polishing apparatus, wherein:

initially conditioning said polishing cloth before use

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in the polishing, by a dressing unit comprising a diamond dresser or an SiC dresser; and

conditioning said polishing cloth between processes of polishing said workpiece to be polished, by a dressing unit
5 comprising a brush dresser.

5. A dressing method for dressing a polishing cloth provided in a polishing apparatus, wherein:

initially conditioning said polishing cloth before use
10 in the polishing, by a dressing unit comprising a diamond dresser or an SiC dresser; and

between processes of polishing said workpiece to be polished, firstly conditioning said polishing cloth by a dressing unit comprising a diamond dresser or an SiC dresser,
15 and then conditioning said polishing cloth by a dressing unit comprising a brush dresser.

6. A dressing method for dressing during polishing of a workpiece to be polished in a polishing apparatus,
20 wherein:

dressing is performed while swinging a dressing unit comprising a dresser having a diameter smaller than said workpiece to be polished; and

after a top ring is withdrawn, dressing is performed
25 by a dressing unit comprising a dresser having a diameter larger than said workpiece to be polished.

7. A polishing apparatus with a polishing table having

a polishing surface and a top ring for pressing a workpiece against said polishing surface of said polishing table to polish said workpiece, said polishing apparatus comprising:

5 a dresser for dressing said polishing surface of said polishing table is further provided, said dresser dressing an area of said polishing surface used for polishing a predetermined position of a surface, to be polished, of said workpiece in accordance with a film thickness to be polished in said predetermined position of said surface to be
10 polished.

8. A polishing apparatus according to claim 7, further comprising:

at least one of a moving mechanism for moving said
15 dresser on said polishing surface of said polishing table, a rotating mechanism for rotating said dresser, and a pressing mechanism for pressing said dresser against said polishing surface of said polishing table; and

a controller for controlling at least one of a speed
20 of movement of said dresser by said moving mechanism, a rotational speed of said dresser by said rotating mechanism, and a pressing load of said dresser by said pressing mechanism, within an area of said polishing surface used for polishing a predetermined position of a surface, to be
25 polished, of said workpiece in accordance with a film thickness to be polished in said predetermined position of said surface to be polished.

9. A polishing apparatus according to claim 7, wherein said dresser has a diameter smaller than said workpiece to be polished.

5 10. A polishing apparatus according to claim 7, wherein said dresser dresses said polishing surface during polishing.

10 { 11. A polishing apparatus according to claim 7, further comprising a cleaning bath for cleaning said dresser.

15 12. A polishing apparatus according to claim 7, further comprising a film thickness measuring unit for measuring a film thickness of a surface, to be polished, of said workpiece.

20 13. A polishing apparatus according to claim 7, further comprising a second dresser for dressing substantially the whole area of said polishing surface against which said workpiece to be polished is pressed.

25 { 14. A polishing apparatus according to claim 13, wherein when said polishing surface has been locally worn, said second dresser dresses substantially the whole area of said polishing surface.

15. A polishing apparatus according to claim 13, wherein said second dresser has a diameter larger than said

workpiece to be polished.

16. A polishing apparatus with a polishing table having a polishing surface and a top ring for pressing a workpiece against said polishing surface of said polishing table to polish said workpiece, said polishing apparatus comprising:

a dressing unit integrally having a first dresser for dressing said polishing surface of said polishing table during polishing of said workpiece to be polished, and a second dresser for dressing said polishing surface of said polishing table when said workpiece to be polished is not polished.

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